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ABSTRACT

This report presents a proposal for the establishment of the Educational Opportunity Bank as an agency of the Federal Government, authorized to borrow money at going government rates, and to lend money to postsecondary students regardless of the student's resources. The Bank is to recoup the loans through annual payments collected in conjunction with the borrower's future income tax. Its objectives are to increase: (1) the total financial resources available for undergraduate education; (2) the freedom of individual institutions to set their own priorities; (3) the viability of private institutions of higher learning; (4) the number of students from low-income families attending college: (5) the probability of good matching of students from low - and middle-income families with institutions suited to their needs; (6) the extent to which students can take responsibility for their own education. The Bank aims to reduce demands by middle-income parents that expenditures on their children's higher education be made tax deductible, and the disparities in opportunity between rich and poor states. Possible disadvantages and alternatives to the Bank are discussed, as well as problems that will require further study. Financial calculations concerning the operation of the Bank are given in the appendix. (AF)

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EDUCATIONAL OPPORTUNITY BANK

A Report of

the Panel on Educational Innovation

to the U.S. Commissioner of Education,

the Director of the National Science Foundation, and

the Special Assistant to the President for Science

and Technology

AUGUST 1967

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THE PANEL ON EDUCATIONAL INNOVATION
IS UNDER THE AUSPICES OF
THE PRESIDENT'S SCIENCE ADVISORY COMMITTEE
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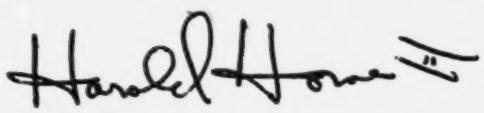
Preface

We are releasing this report of the Panel on Educational Innovation in the interest of stimulating general public discussion of a proposed new means of helping support higher education in this country.



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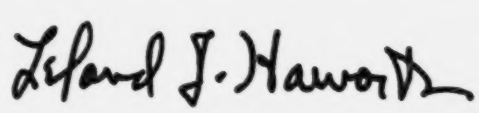

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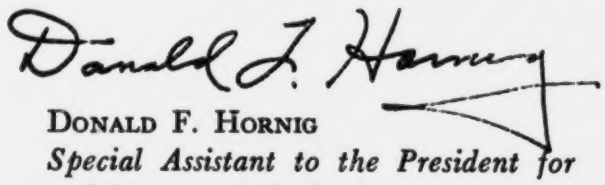

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Chairman's Foreword

I am pleased to present on behalf of the Panel on Educational Innovation this proposal to set up a novel loan program to help students pay for their education beyond secondary school. The Panel believes that the plan has many virtues as outlined in the proposal beyond the primary one of providing loans for which repayment is contingent on the borrower's later ability to pay. But three strike me as having transcending importance.

1. The Bank would make it possible for any student to pay his *own* way, if necessary, at any college, university, or other postsecondary institution to which he could gain admission. At the same time, this proposal does not interfere with support of education by local, State, or Federal Governments. Further, in no way does this program abrogate the right of any future Congress, or force on it the need, to appropriate funds if it does not wish to do so.

2. Large government programs, whether they entail grants, subsidies, scholarships, or other allocations, are most easily administered when there is no need for discrimination among recipients. Our proposed program requires no one to decide between the rich and the poor, or among the merits of various cities, States, institutions, etc. It needs no peer-group evaluations, no political pressures, no compromises among the various aspects of civil rights.

3. If this borrowing program became popular and if a substantial portion of higher education were in fact paid for by tuition and subsistence charges, the flexible funds of private foundations might be used in flexible ways for innovation, improvement, research and development, and in the future might result in a better understanding of the processes of learning and of education.

JERROLD R. ZACHARIAS,
Chairman, Panel on Educational Innovation.

Recommendation

The Panel recommends establishment of a bank, which might be called the Educational Opportunity Bank (Ed Op Bank), as an agency of the Federal Government. In order to obtain funds, the bank should be authorized to borrow money at going Government rates. It should be authorized to lend money to postsecondary students, regardless of the student's resources. A student should be able to borrow enough money to cover his tuition, costs, and subsistence at whatever college, university, or other postsecondary institution he is admitted to. The Bank would recoup these loans through annual payments collected in conjunction with the borrower's future income tax. At the time a loan was granted, the borrower would pledge a percentage of his future income for a fixed number of years after graduation. The Panel recommends that the number of years for repayment be 30, or perhaps 40, years. This period would be a fixed term for all borrowers. The percentage of income pledged would be proportional to the amount borrowed. Preliminary estimates are that the Bank could be self-sustaining if it charged borrowers 1% of gross income over 30 years for each $3,000 borrowed.

This might be considered not a "loan program" at all, but a device for enabling students to sell participation shares in their future incomes. For purposes of clarity we refer to the proposal as one for "contingent-repayment loans" and to present programs as "fixed-repayment loans." Contingent-repayment loans have three principal advantages to the individual over present fixed-repayment programs:

1. No student borrower would have to worry about a large debt he could not repay. If he entered a low-income calling, or were unsuccessful in a normally affluent one, his obligation to the Bank would decrease proportionately to his income for that period. (Indeed, if a borrower's income fell below a certain level, e.g., because of illness, his obligation for the year might even be completely forgiven.)

   We anticipate that this would make students much more willing than they currently are to borrow for higher education. Students from low- and middle-income families would no longer be at a significant financial disadvantage in seeking higher education and would be almost as free as students from wealthy families to choose among the colleges for which they are academically qualified. As a result, the proportion of low-income students attending college might increase appreciably and the proportion able to attend colleges well suited to their needs might increase substantially.

2. By spreading repayment over 30 or 40 years instead of 10, the Bank would make it feasible for individuals to borrow much larger sums than are currently allowed. Estimates in the Appendix suggest that the Bank could break even if it charged borrowers 1 percent of gross income over 30 years for each $3,000 borrowed. Currently authorized loan programs have a *4-year* maximum of $5,000. Five thousand dollars will not cover subsistence and tuition expenses for 4 years at most residential colleges or at most private commuter colleges.

The Bank would be able to lend enough to cover subsistence and tuition at *any* college. This would currently mean a 4-year maximum loan of at least $15,000, rising in subsequent years. We doubt that many students would choose to borrow this heavily, since this would mean committing about 5 percent of their future earnings. Nonetheless, the option would be available to the poor but ambitious student who wanted to attend an expensive private college but could not obtain adequate scholarship assistance.

3. The availability of loans would not be directly affected by the state of the money market.

The Bank *could* differ from existing Federal loan programs in another important respect: it could probably be financially self-sustaining. However, the Bank might also be subsidized by the Federal Government, in the same way that present loan programs are subsidized. The extent to which the Bank might be used as a channel for Federal subsidies for education could be easily adjusted by Congress at any time. The Bank itself would be both viable and useful whether or not it was subsidized.

The Bank is not a substitute for other Federal, State, local, or private programs. Indeed, it is hoped that these programs would continue to expand.

More details about the probable size and viability of the Bank are included in the Appendix.

Objectives

The Bank is intended to:

1. Increase the total financial resources available for undergraduate education.

2. Increase the freedom of individual institutions to set their own priorities.

3. Increase the viability of private institutions of higher learning.

4. Increase the number of students from low-income families attending college.

5. Increase the probability of good matching of low- and middle-income students with institutions suited to their needs.

6. Increase the extent to which students can take responsibility for their own education, instead of depending on a "free ride" from either their parents or the Government.

7. Reduce demands by middle-income parents that expenditures on their children's higher education be made tax deductible.

8. Reduce the disparities in opportunity between rich and poor States.

We will take up these objectives in turn and then discuss possible disadvantages and alternatives.

Increasing Total Resources for Higher Education. The country is increasingly committed to making it possible for each citizen to receive all the education he desires and is capable of absorbing. To accomplish this as regards higher education, additional funds are essential for:

a. Maintaining the quality of education in existing institutions in the face of rising costs of all sorts.

b. Expanding existing institutions and creating new ones to serve the needs of the increasing percentage of a rising population who will be studying beyond high school.

In addition, *improvement in quality* of education at all but the richest institutions requires additional funds. There are four possible sources for these needed new funds:

State and municipal governments, which are likely to increase their effort, but probably not at the necessary rate except in the unlikely event that there are dramatic changes in their tax structures.

Private philanthrophy, which provides a steadily declining (though still important) share of total costs.

The Federal Government, which is under increasing pressure to make general support of higher education a permanent part of the Federal budget.

The student (and/or his family or other sponsor).

The Ed Op Bank plan uses the Federal borrowing power to make it reasonable and feasible for a larger percentage of the institution's cost of providing education to be charged to the student in the form of an increase of tuition and room and board charges to something closer to their actual cost. At present the *price* of higher education—the amount paid by the student or his sponsor in the form of tuition and subsistence—covers substantially less than the total *cost* per student. In 1963–64, the *cost* per student averaged about $2,850—about $1,500 for instruction and about $1,350 for subsistence. The *price* averaged about 60 percent of the cost—about $500 for tuition and $1,200 for subsistence.[1]

On philosophical grounds there is room for debate about whether a price increase, as opposed to subsidy, is desirable. Many educators argue that the principal beneficiary of higher education is not the individual student, but society as a whole. They therefore argue that society as a whole should pay for higher education through taxation (by this they almost always mean educational costs, but *not subsistence*). Others argue that society as a whole *already* pays for the benefits it receives from higher education, by paying a premium for the services of those who have been to college. This premium may, however, be less than the true value of the benefit. The value of medical education to society, for example, may not be adequately measured by the difference between what a man earns if he goes to medical school and what the same man earns if he does not. Similarly and more probably, the service teachers render society may be worth more than the salaries they receive. Even if the *average* teacher is paid as much as his services are worth to society, giving a teacher high-cost, high-quality education may increase his value to society by more than the rather modest salary advantage he usually gets as a graduate of a "good" college.

Unfortunately, there is no good empirical way to judge what fraction of the benefits of higher education accrues to college alumni in the form of

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[1] These estimates are very approximate. See USOE's 1966 *Digest of Educational Statistics* for estimates of enrollment, income, tuition, and charges. Federally financed research has been excluded from institutional expenditure in computing costs per student, as have self-financing dormitories and dining halls. Estimates of subsistence costs are from Lansing, Lorimer, and Moriguchi, *How People Pay for College* (Survey Research Center, Institute for Social Research, the University of Michigan, Ann Arbor, Mich., 1960). It is unclear to what extent scholarships, federally subsidized loans, federally subsidized jobs, subsidies to the construction and operation of dormitories shift the cost of student subsistence to others. Our estimate of 12 percent may be low. The figures above do not include cost of new construction.

higher salaries and what fraction accrues to society in the form of better services at given salary levels. The present distribution of the costs of higher education (i.e., about 60 percent to the individual and about 40 percent to society through taxation, philanthropy, and the like) may or may not be equitable. We have no way of knowing. Nor has equity of this kind been a principal consideration in setting the price of higher education. Both public and private subsidies have rather been justified primarily on the grounds that increasing the price to the student would bar many deserving students from college entirely.

Whatever the dictates of equity, it seems clear that society is not generally willing to allocate sufficient tax resources to provide high-quality undergraduate instruction at a low price. Unless their own children happen to be attending college, relatively few taxpayers *feel* they benefit from improvements in educational quality. The result is that in only a few cases have legislators been willing to provide money on the scale necessary to foster high quality. This problem is particularly acute for those institutions which are most dependent on tax subsidies and pass on the smallest fraction of the total price to the student; namely, the much-needed public junior college. A practical way to obtain sufficient funds to provide high-quality education is to raise the price to the individual beneficiary—the student. In doing this one must ensure that price increases will not exclude students with low-income parents from college. The Bank should ensure this, while bringing a number of other advantages discussed in this report.

Freeing Colleges to Set Their Own Priorities. Most of our colleges, like weak industries, find that trying to balance income against expenses is touch and go every year. And like weak industries they cannot expend much of their resources on research in product improvement. While a vigorous industrial enterprise may spend 5 percent of its resources on product research and development, our educational enterprise spends less than 0.2 percent on research and development of its primary product, education. Consequently, we have seen neither great improvement nor decline in cost of the product.

So long as both public and private institutions feel obliged to keep prices as low as possible, their capability to innovate depends largely on what outside agencies are willing to finance. This problem is particularly acute in public institutions, which get almost all their funds from State legislatures and the Federal Government. In recent years, however, private institutions, too, have become increasingly dependent on the Federal Government and private foundations for support of internal improvement. While these external agencies have often encouraged improvements which the institutions would not have undertaken on their own, they have also declined to support some changes which the institutions regarded as urgent. We believe that additional income from students can be a major source of support for such innovations in both public and private institutions.

Adequate financial resources do not, of course, insure innovation or higher quality in a given institution. However, the competition created by the freedom of students to choose their institutions (discussed below) and the increased opportunity for any institution to create striking new programs or to improve old programs should stimulate improvement in postsecondary education.

It has been argued that having the students pay a larger share of the cost of education could make colleges too dependent on those students who have unsophisticated ideas about what kinds of education they need. While there would be considerable danger in making higher educatiton *entirely* responsive to market pressures, just as there is in making it *entirely* responsive to governmental and philanthropic pressures, most other forces, including Federal expenditures for higher education (notably those for faculty research), have the effect of making higher education *less* responsive to the expectations and desires of undergraduates. Increasing the relative economic influence of students would only help to redress a current imbalance.

Increasing the Viability of Private Institutions of Higher Learning. The present trend in higher education is for the number of students attending private institutions to diminish steadily relative to the number attending the public institutions. In recent years the shrinkage has been about one percent per year. This means that, if present trends continue, private institutions will be enrolling no more than one-fifth of all students by 1980. The reason for this is clear. The ratio of private to public college prices has changed dramatically in the past decade. From 1928 to 1956, the ratio had been relatively constant at 1.5 or 1.6 to 1. Since then it has risen to 2 to 1. As a result many private institutions will have either to close or to hand themselves over to the States.

We believe that the private institutions, both large and small, have been important sources of quality, diversity, and innovation in higher education. If the present trend continues, these sources may largely be lost. Allowing the price of education, at both public and private institutions, to rise to something closer to its actual cost, as would be made feasible by the Bank, should alter this trend.

Increasing the Number of Low-Income Students Attending College. The Bank would make borrowing more attractive to students from low-income families. These students' expectations concerning their future incomes are lower than those of the more affluent. Thus they are more reluctant to incur substantial debts which will have to be repaid soon after graduation (or dropping out). A contingent-repayment loan, repaid by a percentage of future earnings, large or small, should be less frightening. Thus the Bank should increase the proportion of low-income high school graduates going to college. It should also give the student from a low-income family nearly the same freedom in choosing a college that a student from a high-income family now has.

The Bank might also have a significant effect on the proportion of low-income students finishing high school. If students knew that higher education was available to them at no immediate cash cost—and knew this even in seventh or eighth grade—they might be more readily convinced that finishing high school was worthwhile. Indeed, opening the possibility of college to everyone should also have important psychological effects on children from poor families, their parents, and their teachers from the beginning of the child's life. The resulting need to prepare such students for college might have a positive effect on school programs.

Matching of Students and Institutions. An increasing fraction of students have little or no choice about where they enroll. They must attend commuter colleges or, failing that, residential colleges near home. Most of these institutions do not have funds adequate to enable them to offer instruction suitable for the entire range of students. If, however, commuter colleges were able to raise their price, they would be in a position to improve their instruction.

If all students could choose freely among institutions for which they are academically qualified, two things might happen. Appreciable numbers of students who now feel constrained to attend colleges within commuting distance might go to residential colleges. Some argue that this is highly desirable, especially for lower income students, even if the formal instruction is identical, since a considerable part of the value of college for some comes from widening one's horizons by being away from home. In addition, a larger number of able students would apply to better colleges without regard to location. These colleges would be able to select their students more on the basis of promise and less on the basis of parental income. More of the ablest students would thus get an education suited to their capabilities than is now the case.

Making Students Responsible for Their Own Education. The present organization of higher education tends to prolong adolescence. Students continue to be dependent on their parents and, in many cases, on their colleges until well into their twenties. Most students regard higher education as something which somebody else *gives* them, rather than something they have to *get* for themselves. This is probably related to the fact that other people (parents, taxpayers, alumni) pay most of the cost. If students, starting at age 17, were able to borrow against future income to buy their education in an open market, both real and psychological dependence on adults could be appreciably reduced. Students would be free to take responsibility for their own lives and to make important choices for which they would take the consequences. Every student would be in much the same position as a returning GI, who has an "education benefit" to spend as he chooses. Such students tend to take college more seriously, and colleges tend to reciprocate.

Reducing the Demand for Tax Deductions Among Middle-Income Parents. Current proposals to make parental expenditures on higher education tax deductible have almost nothing to recommend them. They provide almost no advantage to the poor parent who is taxed at a low rate. They provide the maximum advantage to rich parents taxed at high rates. They therefore provide incentive to expensive colleges to increase tuition further, while providing minimal incentive to inexpensive colleges to do so, thus increasing economic segregation in higher education.

Nonetheless, demands for tax deductions reflect a real feeling of anxiety and resentment among middle-income parents, many of whom find they cannot, in the face of rising prices, give their children freedom to attend whatever college they can qualify for. The Bank would enable such parents to transfer part or all of the burden to their children. While we would not expect most middle-income parents to go to the latter extreme at first, since they are habituated to the idea of taking responsibility for their children through college, this pattern might well change.

Reducing the Gap Between Rich and Poor States. Relatively few students can afford to attend institutions outside their home State, since private residential colleges are very expensive, and even public ones charge out-of-State students substantially more than they charge "natives." These protective tariffs have the unfortunate effect of confining most students to their home State, even if the State is very poor and has relatively inadequate institutions of higher learning. The Bank would not solve this problem, but it would alleviate it in two ways. First, students could more freely leave their home States if they wished to do so. Second, institutions in poor States could raise tuition, since the amount their students could spend on higher education would depend on estimates of national rather than local average income. This would tend to equalize college prices and hence raise college quality in poorer States.

Possible Disadvantages

Part of the Bank plan is to enable both public and private colleges to raise tuition. Those students who were reluctant (e.g., some of the very poor) or ineligible (foreign students) to borrow from the Bank would therefore find it harder to attend college. This argument, however, applies to *all* loan programs. Special arrangements for such students are discussed later.

The program might slow the growth of both State and private support for higher education. The same can be said about *any* program of Federal assistance. If alternatives such as the Bank can be found, slowing the growth of State support may be desirable, since (1) it rests on regressive taxes, (2) it is usually available only to State-controlled and not private institutions, and (3) State resources devoted to higher education must generally be diverted from other equally urgent needs. In 1963–64 private support was $0.6 billion, about 6 percent of all college receipts. It is not clear that new sources of income would seriously diminish this private support; appeals for funds

to finance innovation might well prove to be more attractive than pleas for help in reducing operating deficits.

Enabling poor but talented students to go to selective colleges might leave the unselective and mediocre colleges with even fewer able students than they now have. This would make it harder for the unselective colleges to attract faculty, and harder for the students who had to attend such colleges to get a good education. This argument has some weight, but we do not think it persuasive, for we do not think it fair to ask poor but able students to go to poor colleges in order to improve those colleges, especially when no comparable sacrifice is asked of the rich but able.

Possible Alternatives

Federal assistance to the States, either through grants for higher education or general purpose grants along the lines advocated by Heller and Pechman

The difficulties here are several. First, such grants would probably do little to give individual institutions more flexibility or autonomy. Second, such grants would do nothing to widen the range of collegiate choices open to most students (since provision for subsistence is unlikely). Third, such grants would do nothing to make students more responsible for their own education or to make institutions more responsive to their students. On the contrary, they would accelerate the trend in the opposite direction. Finally, such grants would generally do very little for private institutions.

Subsidy of institutions on a per-student basis

Although attractive to institutions, per-student subsidies are unlikely to give the colleges more than a fraction of the money that they could obtain from a tuition increase of the size made practicable by the Bank. Moreover, the second and third objections above apply here with equal force.

Federal grants for improving undergraduate programs

We regard such support as a very desirable complement to the Bank program, rather than as a substitute. As has been indicated above, we expect the Bank program to exert pressure to improve quality of education; some of the Government money that might otherwise have gone into general aid could now be given specifically for improving quality. Such a program cannot be thought of as equivalent to the Bank since it makes no provision for increased student opportunity, choice, and responsibility.

Federal assistance administered on a programmatic basis through a "University Grants Committee" arrangement comparable to Great Britain's

There is little reason to think that a massive program could be better administered on a national basis by a committee than by a Federal agency. (The British system works mainly because there are so few universities.) Nor is there any reason to believe that Congress would give such a committee autonomy in allocating money between institutions (and hence between congressional districts).

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Questions Requiring Further Study

Prospective high earners

In order to insure students against the risk of a low adult income, the Bank must either make a profit on those students who earn high adult incomes or else obtain a Government subsidy. If the Bank is to be self-sustaining, gains from high earners must offset losses on low earners. This raises the possibility that prospective high earners would mostly choose to finance their education in other ways, depressing the median income of the Bank's borrowers and reducing the amount it could lend on a given percentage of future income. One solution would be to lend only to good risks. This would defeat a principal objective of the Bank. The other would be to make Bank loans attractive even to those who have a good chance of doing very well. In order to do this the Bank would have to come fairly close to matching the terms on which loans are at present available to such students. (It need not *quite* match them, since no student is certain he will become rich, and many with excellent prospects would be willing to pay something for the insurance feature, and the maximum amount available under present plans falls considerably short of maximum needs.)

Present federally guaranteed loans are repayable at 6 percent annually, over 10 years. (If the adjusted income of the borrower and his family was below $15,000 at the time the loan for the next year was made, the Government pays the full interest until 9 months after graduation and half the interest thereafter.) We therefore propose that the Bank allow its borrowers to treat their debts as 6-percent loans if they wish. A borrower who found himself paying back much more than he had received should always have the option of paying off the entire loan, plus interest compounded at 6 percent annually. Very few of those who borrowed heavily while in college would be in a position to repay soon after graduating. Even those who *could* repay would be unlikely to do so, since during the early low-income years the annual payments would seem quite low compared with the large lump sum owed. More borrowers might decide to buy out in their late thirties and forties, but by then the compound interest would have mounted very substantially, and it might begin to seem easier to go on paying small sums for a few more years. In any event, the Bank would realize a substantial profit on those who bought out at this stage, for it would have borrowed money for them at around 4 percent while getting 6 percent back.

The relationship of scholarships, fixed repayment loans, and contingent repayment loans

If students can buy out of the contingent repayment loan scheme by treating it as if they had received a fixed repayment loan, the program is, in effect, both a contingent and a fixed repayment one. It could, and we believe should, subsume existing Government-supported fixed repayment programs. If a partially subsidized loan program is available to all in competition with an unsubsidized Ed Op Bank program, then middle-income students who require small loans would borrow primarily from the subsidized program while the low-income student, who needs a large loan, would have to borrow from the Bank. This might seriously affect the financial viability of the Bank. However, we do not advocate that the funds now devoted to subsidizing loans be withdrawn from education. Rather we stress the importance of maintaining and expanding existing scholarship and work-study programs in order to aid low-income students who might view borrowing their total needs an excessive burden. Money now devoted to loan programs should be rechanneled into scholarships and other direct subsidies.

Maximum loan

We believe strongly that the maximum loan should be large enough to permit any student to attend a college that has accepted him, regardless of his financial circumstances. The loan should be sufficient to allow him to make his choice on educational considerations rather than financial ones. It must cover tuition and subsistence (including the cost of subsistence for students living with their parents or the cost of supporting a family in those cases where the student has one) at even the most expensive schools. *If the maximum is set low, as it is under present programs, one of the prime objectives is defeated, since students lose their freedom of choice.*

Since a student would have to obtain a certificate of enrollment at a college in order to obtain his loan, the maximum size of his loan might vary according to the stated tuition at that college. We question whether students should be able to borrow in order to replace earnings foregone except perhaps in cases of extreme hardship where the student must help support parents or others, and then only if these subsistence costs for dependents cannot be met by direct subsidy programs for the hard-core poverty group.

Eligible institutions

We would favor the broadest possible definition, including at least those eligible under the National Defense Education and Higher Education Facilities Acts, as well as schools of art, music, dance, theater, and the like. A major aim should be to give the student as much freedom as possible in his choice of field of study.

Administration

The most promising mechanism appears to be a separate agency operating outside the regular Federal budget but empowered to issue bonds backed by

the Federal Government. This agency might or might not receive annual subsidies from Congress. The most feasible means of collection seems to be by the Internal Revenue Service. The Bank plan requires only minimal Government involvement, leaving most decisions with the institutions and the students.

Federal subsidies

If the Federal Government paid part of the interest on bonds issued by the Bank, the Bank could advance money to students on even more attractive terms than would otherwise be possible. It could not, however, *guarantee* that these attractive terms would be available forever without obligating future Congresses to subsidize the Bank. Congress could, however, make an annual decision to reduce borrowers obligations by a fixed amount, which might vary according to the state of the economy and the political climate. It is not clear, however, why *any* of the obligation should be forgiven. If the aim is to make the loans more attractive to students who might otherwise not go to college, the same objective could be achieved by offering a partial scholarship in tandem with an unsubsidized loan. Subsidies to the Bank, on the other hand, would go to the least needy as well as the most.

Women

Women pose special problems because upon marriage many of them either stop earning altogether or temporarily halt their incomes during the years of bearing and rearing children. For these reasons and because of continued disparities between men's and women's salaries, the lifetime incomes of college women appear to average about a third of those of men.

Because of these differences, women's repayment rates could be calculated separately from men's, in which case women would have to pledge 3 percent of their future incomes to get the same amount of cash that a man gets by pledging 1 percent of his income. This seems unfair to career women, especially to teachers. It also seems likely to reduce the number of women entering college, since tuition would rise as men's ability to pay increased.

If the repayment rates were the same for both men and women, many women would never have to repay the full amount. Knowing this, they might feel relatively free about borrowing, and tuition and other costs at women's colleges might be differentially affected.

A third possibility would be to require all borrowers, men and women both, to pledge a percentage of their future *family* income. Although women might in theory be reluctant to accrue large debts that would have to be assumed by their husbands, women have taken National Defense Education Act loans in proportion to their numbers in college. (This may, however, reflect the fact that the 50-percent "teacher forgiveness" feature of National Defense Education Act loans makes them especially attractive to women.) A woman might be given the option of paying only on her own income if she filed a separate income tax return, while having to pay on her husband's income if she filed jointly. Most families would find they save

more by filing a joint return and helping pay the wife's obligations than by filing separately. There are various other possibilities which should be considered in a further study.

Starting

We do not anticipate extremely heavy demand for Bank loans during the first few years, and we therefore doubt that the total borrowing of the Bank in these years will need to be very great. Loans during the first year might well total less than $1 billion. But we also anticipate that as the idea catches on the volume will rise sharply. This could conceivably happen in the first year. If *every* undergraduate were to borrow enough to finance the present *full* price of attending college, the Bank would have to lend about $7 billion in its first year. Fearing some such unexpected development, Congress might insist on setting an upper limit on the Bank's borrowing authority. If demand exceeded this limit, loans would have to be rationed.

There are a number of possible ways to ration funds. The maximum loan to individuals could be limited. We oppose this because one of the most important features of the program is that it enables students to borrow large sums to attend high-quality, expensive colleges. Most other alternatives also have drawbacks. A means test would fail to serve the needs of the middle-income family, lose the psychological advantages to less needy students, and probably require a higher repayment rate. An "academic aptitude" test would exclude most applicants from low-income families. Institutional quotas would freeze the present distribution of students among institutions and prevent the very market adjustments which we see as a prime objective of this program. State quotas would succeed in passing the buck to another authority, but would solve nothing and perhaps create additional inequities. Tampering with repayment rates would probably have a limited effect on demand. A lottery would work only if total demand were measurable before the first loans were made and would make the Bank less effective in reaching persons who would not otherwise have gone to college. First come, first served has many advantages, but favors the more foresighted middle-class applicant from a school with a shrewd college counselor. If an initially low maximum must be set for some reason, our preference would be to start with freshmen and then expand the program to include an additional class each year.

Closing down

If for some reason the program did not work, new loans could always be withheld. It would, however, be difficult to close the program down entirely, since outstanding loans would have to be collected over a 30–40 year period—unless a bargain "buy-out" plan were regarded as preferable.

Length of obligation

The effect of different periods of obligation on borrowing and repayment rates is shown in the Appendix. A long repayment period is, as has been

discussed, an essential feature of the plan. The exact length, which might be shorter for people who undertake study later in life, is a question for study.

Economic impact

The effect of a multibillion-dollar loan program on the money market, interest rates, and overall economic stability requires further study.

Emigrants

Emigration of persons who have received money from the Bank poses special problems.

Dropouts

Students who drop out of college without taking a degree have poorer income prospects than those who graduate. They are also more likely to have borrowed from the Bank. On the other hand, a large percentage of present dropouts cite financial difficulties as the cause of dropping out and thus the Bank might well cut the dropout rate substantially.

Graduate students

While the logic of the program applies to graduate as well as undergraduate students, the cost of graduate education in the arts and sciences is so high in relationship to the returns to the individual student that it may not be feasible to extend the program to graduate students. In professional schools like law and medicine, on the other hand, such a plan seems workable.

The very poor

As has been mentioned, students from very poor families may be reluctant to take on even a contingent-repayment obligation, and special measures may be required. Study of experience in present loan programs should be useful.

Foreign students

Raising the price of education will affect the inflow of foreign students. Existing scholarship funds could be applied more heavily to support of foreign students, as has, indeed, to some extent already happened. Special subsidy might be found to be in the national interest.

Actuarial errors

Predictions of income 30–40 years into the future for particular classes of individuals are obviously uncertain. The Bank could find itself in the awkward position of having seriously overestimated revenues. Several methods could be used to guard against this danger.

a. The Bank could be very conservative in calculating the sums which it would lend against a fixed percentage of future income. Then if it began to accumulate a surplus, this could be repaid to the borrowers as an annual "dividend" comparable to those paid on GI insurance.

Alternatively, the borrower could be held to his annual obligation, but if his college cohort repaid its total obligation before the 30 or 40 years' commitment was up, payments could be terminated a few years ahead of schedule. A third possibility would be to plow such profits back into the Bank, offering better terms to the next generation of borrowers.

b. The Bank could cover any errors made in the first few years by overcharging subsequent borrowers. This would not work if the initial errors were serious, since students could refuse to take Bank loans if the terms became too unfavorable and they knew they were paying for the Bank's mistakes with a previous generation. But such adjustments could cover minor miscalculations.

c. The Bank could fall back on other federal revenues if its calculations proved overly optimistic.

Panel on Educational Innovation

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The Panel is aware, of course, that variants of this idea have been proposed by a number of persons, including Allan M. Cartter, Chancellor, New York University; Charles C. Killingsworth, School of Labor and Industrial Relations, Michigan State University; and William Vickrey, Chairman, Department of Economics, Columbia University, to whom we are especially grateful for help in our consideration of the many issues.

The Panel also thanks the following persons who served as consultants to this study: Christopher Jencks, Institute for Policy Studies, and Joseph Turner, writer on education.

Appendix—Financial Calculations

In 1963–64 students payed $1.9 billion in tuition and fees to institutions of higher learning, while $4.1 billion was provided by Federal, State, and local governments, endowment earnings, gifts, and other sources, exclusive of Federal support of research. In addition, students spent perhaps $4.5 billion for living expenses. We expect that one effect of the Ed Op Bank program would be to make the price to the student of higher education more nearly in line with the cost. Allowing also for increasing enrollments, it seems likely that the total price of higher education will become about 1.5 percent of the gross national product (GNP). If we assume that the college-educated segment has more than half the total income of the Nation (we expect to give a college education to at least half the population), we find that the college educated would pay between 2 and 3 percent of their income in return for their education. This rough analysis is borne out by the more detailed projections discussed below.

Let us assume that the growth in salaries is exactly the same as the interest rate at which the Bank can borrow money. (This is a fairly realistic assumption; at present these rates seem to be within a small fraction of a percent of one another.) On this basis the Bank could lend $3,000 to a student now in return for 1 percent of his income in the first 30 full years after graduation. The mean full price of a college education is now about $6,000, so a student could borrow the price of 4 years at college for 2 percent of his future income. This figure is consonant with our previous estimate because of the effect of women.

Women present a peculiar problem because their expected incomes are only about a third of men's. Our tentative solution is to require a husband to pay his wife's percentage if he and his wife file a joint income tax return. Hence a college man with a college wife who had both borrowed the average price of a college education would pay 4 percent of their joint income for 30 years. If both had borrowed the full cost of 4 years at an expensive college, the figure would be about 10 percent.

It is impossible to give a completely accurate picture of the price of loans under this scheme without a very comprehensive study based on data which are not now available. To get a general picture, however, we have prepared a table of amounts to be lent under varying assumptions about repayment schedules and the relation of salary growth to interest. We have assumed that repayments are required over 20, 25, 30, 35, or 40 years and that the growth rate of salaries is 1 percent more, the same as, and 1 percent

less than the interest rate. The following table shows the amount the Bank would advance against a commitment of 1 percent of income for the specified number of years.

Number of years of repayment	Salary growth rate		
	1 percent less than interest rate	Same as interest rate	1 percent more than interest rate
20	$1,615	$1,815	$2,045
25	2,095	2,419	2,803
30	2,538	3,007	3,580
35	2,912	3,528	4,303
40	3,190	3,934	4,895

These numbers are based on data for 1965. They will increase each year as salaries grow.

We must also estimate how much money has to be borrowed to operate the plan. Assume a 30-year repayment schedule. Using uncertain projections of the price of college education and the number of college students, and assuming *one-third* the price of undergraduate education will be financed by the Bank after a few years, we obtain the following estimates of amounts to be lent during the first years of the program, which we assume starts in the academic year 1968–69.

Year	New loans (billions)	Repayments (billions)	Outstanding, including 4 percent interest (billions)	Outstanding as a percent of GNP
1968–69	$0.7	.....	$0.7	0.1
1969–70	1.1	.....	1.8	.2
1970–71	1.5	[1]	3.4	.4
1971–72	2.1	[1]	5.6	.6
1972–73	2.7	[1]	8.6	.9
1973–74	3.4	$0.1	12.3	1.2
1974–75	4.1	.1	16.8	1.6
1975–76	4.5	.2	21.8	2.0
1976–77	4.8	.2	27.3	2.4
1977–78	5.1	.3	33.2	2.8
1978–79	5.5	.4	39.6	3.2
1979–80	5.9	.5	46.6	3.7

[1] Some repayments will be received in these years but less than $0.05 billion.

Projections in dollars beyond this range seem to be so highly speculative as to be pointless. However, there are some gross projections which are less sensitive to price fluctuations. Assuming the population of the country stabilizes, then the number of college students will stabilize and the Bank fund would also. Then new loans plus interest on the outstanding debt would be balanced by the repayments to the fund. Depending on the number of years for repayment we can predict the ratio of the total amount outstanding to the amount lent in a single year.

Number of years of repayment	$\frac{\text{(Total Bank credit)}}{\text{(1 year's total loan)}}$
20	11.8
25	14.2
30	16.8
35	19.3
40	21.2

Suppose for example, the repayments are on a 30-year schedule. If the total amount of loans for 1 year is one-third the cost of higher education or 0.5 percent of the GNP, the total amount of Bank loans outstanding will be about ($16.8 \times 0.5 =$) 8 percent of the GNP. This figure should be compared with the present total of nonfarm mortgage credit which amounts to about 30 percent of the GNP.

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